8X CD-ROM Drive
CD820E

User Guide
On-line Version

CREATIVE®

Knowing Your CD-ROM Drive

Creative CD-820E

This booklet contains the following information regarding your CD-ROM drive. It provides you with:

- A summary of the features of your drive,
- A description of its various components and
- A list of its technical specifications.

For more information pertaining to the installation and usage of your drive, refer to the *User's Guide*.

The Features of Your Drive

Your CD-ROM drive is just like a CD player. It allows you to play audio CDs, skip and stop a track, and eject the CD using the controls located at your drive's front panel.

But unlike a CD player, your CD-ROM drive comes with a software application that can transform your PC into an even more versatile CD player (see Chapter 3, "Using QuickCD" of the *User's Guide*).

Furthermore, your drive supports the following features:

- ❑ 8X Speed Transfer
  Your drive can supply a continuous stream of information at 1,200 KB per second to the PC's bus. This high transfer rate allows you to retrieve data much faster from the CD-ROM drive.
- ❑ CD-ROM Standards
  Your drive meets the MPC level 2 requirements for CD-ROM. It also enables you to read CD-ROM/XA (Extended Architecture) — a specification that allows you to interleave data, audio, and video sectors on a CD.

  At the date of printing this booklet, the MPC 3 specifications have yet to be finalized.

- ❑ Motorized Tray Loading System
  Your drive comes with a motorized tray loading system which allows you to load your CDs like a CD player.
- ❑ Multiple Drives Support
  You can connect more than one CD-ROM drive to your PC. For more information on connecting additional drives, refer to the section "Connecting Additional Drives" in Chapter 4 of the *User's Guide*.

The Drive's Front Panel

This section describes the various controls on your drive's front panel as shown in Figure 1.

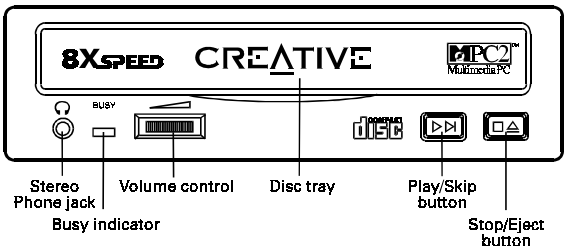

Figure 1: The front panel of your CD-ROM drive.

Stereo Phone Jack

The Stereo Phone jack allows you to connect a pair of earphones to the drive. It also allows you to connect a pair of powered speakers. If you are connecting a pair of speakers to your drive, make sure that you switch on the speakers.

Busy Indicator

The Busy indicator lights up whenever your drive is reading data from your disc. This indicator blinks with a green light when your drive is playing audio and an orange light when your drive is operating in 8X speed mode (1,200 KB per second).

Volume Control

The Volume control allows you to adjust the volume of your earphones or powered speakers connected to the front panel Stereo Phone jack. This control has no effect on the audio output from devices (such as speakers) connected to your audio card.

Play/Skip Button

The Play/Skip button allows you to play audio CDs when the CD-ROM drive is connected to your system's power supply. If your disc tray is ejected and loaded with a audio CD, pressing this button closes the tray and plays the audio CD.

While your audio CD is playing, you can press this button to skip a track. If you play a disc that does not contain any audio data, you will not hear any sound and the Busy indicator blinks momentarily to signal the error.

You can operate your CD-ROM drive using controls on the drive's front panel or using applications such as Creative QuickCD (see Chapter 3 of the *User's Guide*). If you are using the controls on the front panel, you cannot use QuickCD. Similarly, if you use QuickCD, you cannot use the controls.

Stop/Eject Button

The Stop/Eject button stops playing a CD. It also allows you to eject or close the disc tray when the drive is not playing CD.

The Stop/Eject button will not eject the disc tray if the tray is locked by software application. To eject the disc tray, quit the application before you press the button.

Disc Tray

The disc tray is where you place your CD-ROM or audio CD. To eject the tray, press the Stop/Eject button on your drive.

When placing the disc onto the tray, hold the disc by the inner and outer edges with the disc label facing up as shown in Figure 2.

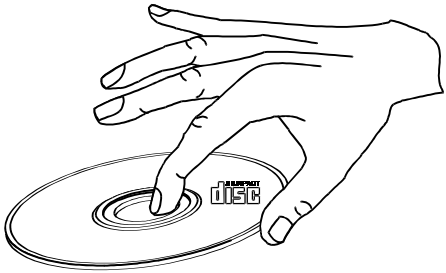

Figure 2: Holding a disc.

The disc tray can be locked using the LOCKCD.EXE utility (see the section “Locking the Disc Tray” in Chapter 4 of the *User’s Guide*).

When there is a power or system failure, you can eject the disc tray by inserting a ruler and pulling the tray out gently as shown in Figure 3 and Figure 4.

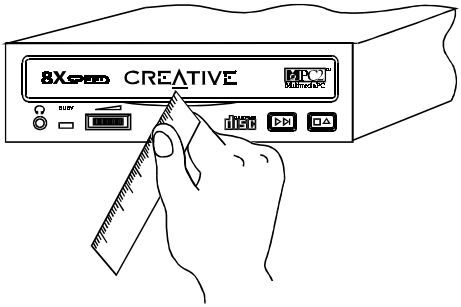

Figure 3: Inserting the ruler to eject the tray.

Please refrain from using excessive force to open the tray as this may damage your drive.

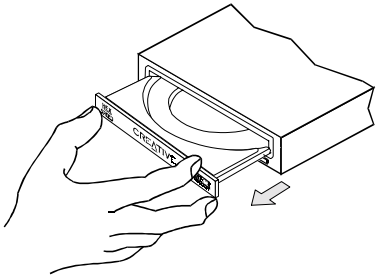

Figure 4: Pulling out the tray.

The Drive's Rear Panel

This section provides you with information on the connectors and jumpers found on your drive's rear panel as shown in Figure 5.

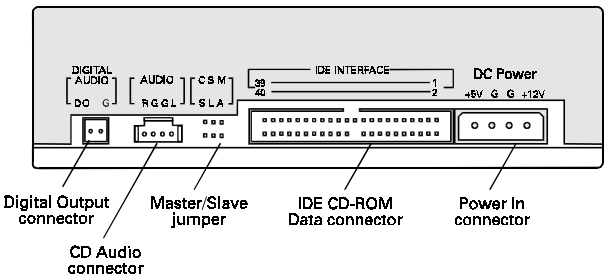

Figure 5: The rear panel of your CD-ROM drive.

Digital Output Connector

The Digital Output connector allows your CD-ROM drive to provide digital output for recording to a digital audio tape (DAT) or professional audio recording system. This connector follows the EBU-IEC958 standard set by the European Broadcast Union.

CD Audio Connector

The CD Audio connector allows you to direct audio output from your CD-ROM drive to your audio card when connected using a CD Audio cable.

Master/Slave Jumper

The Master/Slave jumper (see Figure 6) allows you to set your drive as the Master or Slave drive. When you connect more than one drive, you must set your drive to be either a Master or Slave drive (see the section "Connecting Additional Drives" in Chapter 4 of the *User's Guide*). CS is reserved and should not be used.

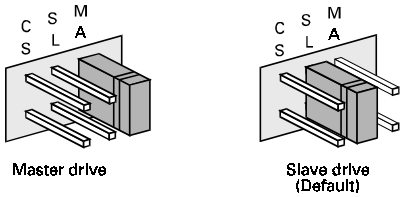

Figure 6: Master/Slave Jumper.

IDE CD-ROM Data Connector

The IDE CD-ROM Data connector allows data transfer between your CD-ROM drive and various devices when connected using a CD-ROM data cable. These devices include your audio card (with an IDE interface), IDE CD-ROM interface card, and hard disk controller card.

Power In Connector

The Power In connector allows electrical power to be directed from your PC to the drive when connected to a power cable.

Technical Specifications

This section provides you with the technical specifications of your CD-ROM drive.

Physical Dimensions

Height	42 mm
Width	146 mm
Depth	210 mm
Color	PC white

Performance Characteristics

Power Supply	1.0 Amp (Max.) on +5 Volts 1.5 Amp (Max.) on +12 Volts
Storage Capacity	
(12 cm Disc)	
60 min	553 MB (Mode 1 & Mode 2 Form 1) 630.7 MB (Mode 2)
74 min	682 MB (Mode 1 & Mode 2 Form 1) 777.9 MB (Mode 2)
(8 cm Disc)	
18 min	180 MB (Mode 1 & Mode 2 Form 1) 210 MB (Mode 2)
Buffer Memory	256 KB
Data Transfer Rate	1,200 KB/sec (Typical)
Access Time (1/3 Stroke)	230 msec (Average)
Error Rate	
Soft Read Errors	1 per 10^9
Hard Read Errors	1 per 10^{12}
Seek Errors	1 per 10^6

Compact Disc Formats

Formats Supported	CD-Audio
	CD-I
	CD Plus
	CD-R
	CD-ROM
	CD-ROM/XA
	Photo CD
	Video CD

Refer to Appendix C of the *User's Guide* for a detailed explanation of the various CD formats.

Typical Audio Performance

Number of Channels	2
Frequency Response	
Line-out	20 Hz to 20 kHz ± 3 dB
Headphone	100 Hz to 20 kHz ± 3 dB
Signal to Noise Ratio	
Line-out	>80 dB
Headphone	>80 dB
Total Harmonic Distortion (at 1 kHz)	
Line-out	<0.15%
Headphone	<0.15%
Channel Separation (Typical)	
Line-out	>65 dB
Headphone	>60 dB
Output (Typical)	
Line-out	0.72 V_{rms} ± 20%
Headphone	0.62 V_{rms} ± 20%

Environmental Operating Limits

Ambient Temperature (No Condensation)	
Operating	5 to 40^{o}C
Storage	-25 to 55^{o}C
Relative Humidity (No Condensation)	
Operating	20 to 90%
Storage	5 to 95%

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